

***Claim Listing:***

The following claims replace all pending claims in this matter.

1-75 (canceled)

76. (Currently Amended) An ordered planar array comprising several different particle types with different ligands attached to different particle types, said particles ligands up to 10 microns in diameter, wherein different particle-attached ligands types are randomly distributed throughout the array, wherein different ligands are attached to different particles, and said particles are encoded with a characteristic and that permits identification of the ligand or ligands attached thereto and permits distinguishing the individual particles including distinguishing different particles from each other, and wherein said particles are in a planar defined area on the surface of a substrate and wherein said particles are affixed to said substrate such that said particles form in a planar loosely packed, ordered array with the particles in hexagonal crystalline configurations designated positions in accordance with a given outline, such that members of different pairs of adjacent particles are the same distance from one another.

77. (Previously Presented) The array of claim 76 wherein the particles are affixed to the surface of the substrate.

78. (Previously Presented) The array of claim 76 wherein the ligands are proteins.

79. (Previously Presented) The array of claim 76 wherein the ligands are nucleic acids.

80. (canceled)

81. (Previously Presented) The array of proteins according to claim 78, wherein different proteins bind to different cell types.

82. (Previously Presented) The array of proteins according to claim 78, wherein the proteins are monoclonal antibodies.

83. (Previously Presented) The array according to claim 79 wherein the nucleic acids are oligonucleotides of DNA or RNA.

84. (Previously Presented) The array according to claim 76, wherein the substrate is a semiconductor.

85. (Previously Presented) The array according to claim 84 wherein the substrate is an electrode.

86. (Previously Presented) The array according to claim 76, wherein the characteristic is a chemical tag.
87. (canceled)
88. (Previously Presented) The array according to claim 77, wherein the particles are affixed to the substrate by chemical bonding.
89. (Previously Presented) The array according to claim 76, wherein the particles are exposed to liquid containing or suspected of containing an analyte.
90. (Previously Presented) The array according to claim 89, wherein the ligands are nucleic acids capable of hybridizing with one or more analytes contained within the liquid.
91. (Previously Presented) An article of manufacture composition comprising one or more of any of the arrays defined in claim 76 to 79, 81 to 86 and 88 to 90.
92. (Previously Presented) The article of manufacture of claim 91 wherein the location of each array on said substrate in combination with the characteristic indicates the types of ligands therein.
93. (Previously Presented) The array according to claim 86, wherein the chemical tag is a fluorescent oligonucleotide.
94. (Currently Amended) The array of claim 76 wherein the particles assume a planar hexagonal configurations are bubble rafts of densely packed beads.
95. (Previously Presented) The array of claim 76 wherein the size of the particles is one to two microns.
96. (Previously Presented) The array of claim 76 wherein the distances between the particles are the same.

97 -116 (canceled)